

## **ARTMENT OF COMMERCE** UNITED STATES L **Patent and Trademark Office**

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Washington, D.C. 20231 FIRST NAMED APPLICANT ATTORNEY DOCKET NO. APPLICATION NUMBER FILING DATE THOMAS 08/914,299 08/18/97 C CDT001A EXAMINER LM21/0729 C DOUGLASS THOMAS PAPER NUMBER ART UNIT 1193 CAPRI DRIVE CAMPBELL CA 95008 2787 DATE MAILED: 07/29/99 This is a communication from the examiner in charge of your application. COMMISSIONER OF PATENTS AND TRADEMARKS All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course. ☐ This communication is responsive to The allowed claim(s) is/are 2/ ☐ The drawings filed on Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d). □ All □ Some\* □ None of the CERTIFIED copies of the priority documents have been received. received in Application No. (Series Code/Serial Number) received in this national stage application from the International Bureau (PCT Rule 17.2(a)). \*Certified copies not received: Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e). A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a). Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED. ☐ Applicant MUST submit NEW FORMAL DRAWINGS because the originally filed drawings were declared by applicant to be informal. including changes required by the Notice of Draftperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. including changes required by the proposed drawing correction filed on by the examiner. including changes required by the attached Examiner's Amendment/Comment. Identifying indicia such as the application number (see 37.CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftperson. ☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included. Attachment(s) ■ Notice of References Cited, PTO-892 ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). Notice of Draftsperson's Patent Drawing Review, PTO-948 ■ Notice of Informal Patent Application, PTO-152 ☐ Interview Summary, PTO-413 X Examiner's Amendment/Comment Examiner's Comment Regarding Requirement for Deposit of Biological Material □ Examiner's Statement of Reasons for Allowance

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An examiner's amendment to the record appears below. 1. the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. C. Douglass Thomas on July 28, 1999.

- The application has been amended as follows: 2. Replace the abstract with the attached abstract.
- 3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Heckler whose telephone number is (703) 305-9666.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 305-3900.

> THOMAS M. HECKLER PRIMARY EXAMINER

THJuly 28, 1999



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## **ABSTRACT**

Novel techniques for controlling a processor's clock frequency and/or fan so as to prevent overheating are disclosed. The invention attempts to maximize the processing speed of the processor while preventing overheating or to reduce power consumption. In a preferred embodiment, the invention monitors a processor's activity and its temperture. When there is no activity for the processor, a slowed clock frequency is used, thereby saving power and lowering the thermal heat produced by the processor. On the other hand, when there is activity for the processor, a fast clock frequency is used. However, when prolonged activity (i.e., sustained fast clock frequency) causes the processor's temperature to become dangerously high for proper operation, the clock frequency is reduced and/or a fan is activated so as to prevent overheating. The invention may be implemented as an apparatus or a method.